

## **ABSTRACT OF THE DISCLOSURE**

Bioelectronic components are formed using nanoparticles surrounded by attached shells of at least one biological material. The nanoparticles are deposited (e.g., using a printing process) onto a surface, and by associating the deposited nanoparticles with one or more electrical contacts, electrical measurement across the nanoparticles (and, consequently, across the biological material) may be made. A finished component may include multiple layers formed by nanoparticle deposition.

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